

WHAT IS CLAIMED IS:

1. A method to release viruses from animal cells containing said viruses, comprising
subjecting the cells to continuous centrifugation under conditions effective to concentrate the
cells into a cell pellet, and

5 ejecting the pelleted cells from the centrifuge into a collection receptacle, under conditions
effective to lyse cells,

wherein no additional step effective to achieve cell lysis is performed.

2. The method of claim 1, wherein the ejected cells are substantially lysed.

3. The method of claim 1, wherein the ejected cells are predominantly lysed.

10 4. The method of claim 1, wherein greater than 90% of the cells are lysed.

5. The method of claim 1, wherein greater than 50% of the cells are lysed.

6. The method of claim 1, wherein the cells are lysed as they are ejected.

7. The method of claim 1, wherein the viruses are Adenoviruses.

15 8. The method of claim 7, wherein the Adenoviruses are recombinant Adenoviruses suitable
for gene therapy.

9. The method of claim 7, wherein the yield/cell of Adenovirus particles or infectious
Adenovirus is greater than that obtainable when cells containing said Adenovirus are lysed by a freeze-
thaw procedure.

10. The method of claim 9, wherein the yield/cell of Adenovirus particles is about 1.2 to about 1.6 fold greater than that obtainable when cells containing said Adenovirus are lysed by a freeze-thaw procedure.

11. The method of claim 9, wherein the yield/cell of infectious Adenovirus is about 1.5 to about 1.9 fold greater than that obtainable when cells containing said Adenovirus are lysed by a freeze-thaw procedure.

12. The method of claim 1, wherein the cells are mammalian or insect cells.

13. The method of claim 1, wherein the cells being ejected are under a relative centrifugal force of 6500 to 7500 g.

14. The method of claim 13, wherein said centrifugal force is about 7000 g.

15. The method of claim 1, wherein the pelleted cells are ejected through one or more ejection outlets having a rectangular shape and a cross-sectional area of 50 to 500 mm².

16. The method of claim 13, further wherein the pelleted cells are ejected through one or more ejection outlets having a rectangular shape and a cross-sectional area of 50 to 500 mm².

17. The method of claim 1, wherein the cells are centrifuged in a Westfalia Centrifuge, Model CSA-1 or CSC-6.

18. The method of claim 1, wherein the forces exerted on the cells at the time of ejection are effective to substantially lyse the cells.

19. In a method of releasing intracellular viruses from cells containing said viruses by continuous centrifugation, the improvement comprising harvesting viruses from the ejected cell pellet directly, without performing an additional step effective to achieve cell lysis.

20. A method to prepare a cell lysate, consisting of
subjecting cells to continuous centrifugation to form a cell pellet, and
ejecting said pelleted cells into a collection receptacle, wherein the collected cells are in the
form of a cell lysate.

5 21. A method to prepare a cell lysate, comprising
subjecting cells to continuous centrifugation under conditions effective to concentrate the cells
into a cell pellet, and
ejecting the pelleted cells from the centrifuge into a collection receptacle, wherein the collected
cells are in the form of a cell lysate,
10 wherein no additional step effective to achieve cell lysis is performed.

22. Adenoviruses prepared by the method of claim 7.

23. Adenoviruses prepared by the method of claim 17.

24. A method to release viruses from animal cells containing said viruses, comprising
subjecting the cells to continuous centrifugation under conditions effective to concentrate the
15 cells into a cell pellet, and
ejecting the pelleted cells from the centrifuge into a collection receptacle, under conditions
effective to lyse cells.

25. The method of claim 24, wherein the ejected cells are substantially lysed.

20 26. A method to release viruses from animal cells containing said viruses, consisting
essentially of
subjecting the cells to continuous centrifugation under conditions effective to concentrate the
cells into a cell pellet, and
ejecting the pelleted cells from the centrifuge into a collection receptacle, under conditions
effective to lyse cells.

27. A method to prepare an intracellular organism, or an intracellular organelle or biological molecule, from host cells containing said organisms, organelles or molecules, comprising
subjecting the cells to continuous centrifugation under conditions effective to concentrate the cells into a cell pellet, and

5 ejecting the pelleted cells from the centrifuge into a collection receptacle, under conditions effective to lyse cells

wherein no additional step effective to achieve cell lysis is performed.

28. The method of claim 1, further comprising subjecting the ejected cells to expanded bed chromatography.